



DIVISION OF
CORPORATION FINANCE

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

May 2, 2014

Via E-mail

Mr. Robert E. Ward
Chief Executive Officer
Radius Health, Inc.
21 Broadway, 6th Floor
Cambridge Massachusetts 02139

**Re: Radius Health, Inc.
Amendment No. 3 to Registration Statement on Form S-1
Filed April 25, 2014
File No. 333-194150**

Dear Mr. Ward:

We have reviewed your amended filings and have the following comments. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure.

Please respond to this letter by amending your registration statement and providing the requested information. If you do not believe our comments apply to your facts and circumstances or do not believe an amendment is appropriate, please tell us why in your response.

After reviewing any amendment to your registration statement and the information you provide in response to these comments, we may have additional comments.

Dilution, page 39

1. We note your disclosure of pro forma net tangible book value as of December 31, 2013 was \$10.4 million, based on 20,643,969 shares of common stock outstanding after giving effect to items listed (1) through (4). The shares listed sum to 20,893,212. Please reconcile the shares outstanding post-offering.
2. We note your table on page 41. Please tell us how you determined that existing stockholders purchased 20,950,476 shares for a total consideration of \$242,642,521. Please reconcile the shares and amounts to those listed on page 39 and ensure consistency throughout the filing.

3. We note that your net tangible book value after the offering includes an adjustment to APIC of \$287,678,000 as disclosed in your pro forma balance sheet on page F-3. The sum of the convertible preferred stock outstanding as of December 31, 2013 and the issuance of Series B-2 convertible preferred totals \$280,202,000. Please tell us how you determined the adjustment amount.

We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filing to be certain that the filing includes the information the Securities Act of 1933 and all applicable Securities Act rules require. Since the company and its management are in possession of all facts relating to a company's disclosure, they are responsible for the accuracy and adequacy of the disclosures they have made.

Please refer to Rules 460 and 461 regarding requests for acceleration. We will consider a written request for acceleration of the effective date of the registration statement as confirmation of the fact that those requesting acceleration are aware of their respective responsibilities under the Securities Act of 1933 and the Securities Exchange Act of 1934 as they relate to the proposed public offering of the securities specified in the above registration statement. Please allow adequate time for us to review any amendment prior to the requested effective date of the registration statement.

You may contact Brian McAllister at (202) 551-3341 or Nasreen Mohammad, Assistant Chief Accountant at (202) 551-3773 if you have questions regarding comments on the financial statements and related matters. Please contact Erin Wilson at (202) 551-6047 or David Link at (202) 551-3356 with any other questions.

Sincerely,

/s/ David Link for

John Reynolds
Assistant Director